

## REMARKS

Claims 18 to 32 are pending in this application. Examiner in an office action dated 1/22/2008 has objected to the claims under 35 USC §112 and or presenting an invention not originally presented by original claims 1 to 17.

Examiner has also objected to the specification not properly amended to remove reference to Figure 2. Further, examiner has rejected claims 18 to 32 under 35 USC §103 (a), as obvious over Showghi et al.

### **Applicant Response:**

1. The changes that have been made in the specification due to deletion of Figure 2, are (i) deleting reference to Figure 2 in the background section, (ii) deletion of Figure 2 in the drawings section, (iii) and renumbering figures 3, 4, and 5 as figures 2, 3 and 4 in the description section. Replacement pages 3, 5, 6, 7, 8, 9, 10, and 13 that highlight these changes are enclosed.

### **2. 35 USC §112 objections to the claim language:**

Applicant has amended claims 18, 22, 24, 28, 30, 31 and 32 to better define the scope of the invention.

Claims 18 to 32 better define the scope of the invention that was originally presented in claims 1 to 17, the invention being for the protection and privacy of customer bankcard data from merchant systems in payment transaction to a restaurant merchant.

Each of the 112 objections is identified and responded to as follows, where each objection is numbered by a letter for ease of the reader:

(a). “an encoded service code, the code encodes [[embeds]] a merchant number identification to a third party central system”

page 3, lines 27 to 28 to page 4, line 14,

5 page 6, lines 16-22 ; page 9, lines 10-14

page 13, line 23 to 25; and Figures 2 and Figure 3

These references to the specification define the service code, and how such a service code is used by the central system. Items 336 for service code and items 442 for  
10 the merchant number, as in Figure 2, that is encoded and is part of the service code as printed on the bill. Since the service code is made up different parts, one of these parts being the merchant number that acts as a merchant identification in the central system, the service code encodes the merchant number.

15 The term “third party central system” is equivalent to the central system as described in the specification on Page 8, lines 2 to 26 and further on page 12, lines 17 to 31, where the description of the central system includes a customer interface function 410 to customer 06 and a merchant interface function 412 to merchant 08, in addition to an interface with the card processor. For such a system “third party” is a commonly used term  
20 of art to characterize such a system that is different than the first party as the customer and the second party as the merchant as principles in a payment transaction. The third party central system is separate from either of these principles to a payment transaction. Figure 2 shows this separation where the customer 06, merchant system 08 and central system 10 are distinct and are separately identified.

25

The American Heritage Dictionary defines “third party” as “One other than the principals involved in a transaction: *I pay rent to a third party, not directly to the landlord.*”

Hence the term “third party central system” is equivalent to the description of central  
30 system 10 as described in the specification as illustrated above. MPEP supports the use

of equivalent language in the claim that is equivalent to what is described in the specification.

Hence, the specification supports the claim language of “an encoded service code,  
5 the code encodes ~~[[embeds]]~~ merchant identification to a third party central system”.

For the reasons identified above, the claim language is supported by the specification and the previously presented claims.

10 **(b).** “wherein the payment transaction request to the central system, having originated from the wireless device of the customer ~~[[did]]~~ not ~~[[originate]]~~ from the merchant computer system”

page 6, line 24, to page 7, lines 1-2

15 page 11, lines 2 to 8, lines 17 to 19, and lines 24 to 27

page 12, lines 4 to 6 ; [age 13, lines 18-29

These define that the payment transaction request to the central system originated from the wireless device and not the merchant system. Figure 2 shows dashed arrows  
20 from device 12 to central system 10 and then to card processor 36, and not from the merchant system 08/04 to either the central system 10 or the card processor 36.

For the reasons identified above, the claim language, “wherein the payment transaction request to the central system, having originated from the wireless device of the  
25 customer ~~[[did]]~~ not ~~[[originate]]~~ from the merchant computer system”, is supported by the specification.

**(c).** “wherein the payment transaction request to the central system, having originated from the wireless device of the customer ~~[[did]]~~ not ~~[[originate]]~~ from the merchant  
30 computer system” any negative limitation or exclusion proviso must have basis in the original disclosure

Page 3, lines 19-20

Page 10, lines 12-15

use of “without” on page 3, to specify that the payment transaction could only originate  
5 from the customer.

Figure 2 shows dashed arrows from device 12 to central system 10 and then to  
card processor 36, and not from the merchant system 08/04 to either the central system  
10 or the card processor 36. Further, the references to the specification in (b) above  
support this language.

**(d). “third party system”**

The term “third party central system” is equivalent to the central system as  
15 described in the specification on Page 8, lines 2 to 26 and further on page 12, lines 17 to  
31, where the description of the central system includes a customer interface function 410  
to customer 06 and a merchant interface function 412 to merchant 08, in addition to an  
interface with the card processor. For such a system “third party” is a commonly used term  
of art to characterize such a system that is different than the first party as the customer  
20 and the second party as the merchant as principles in a payment transaction. The third  
party central system is separate from either of these principles to a payment transaction.  
Figure 2 shows this separation where the customer 06, merchant system 08 and central  
system 10 are distinct and are separately identified.

25 The American Heritage Dictionary defines “third party” as “One other than the  
principals involved in a transaction: *I pay rent to a third party, not directly to the landlord.*”

Hence the term “third party central system” is equivalent to the description of central  
system 10 as described in the specification as illustrated above. MPEP supports the use  
30 of equivalent language in the claim that is equivalent to what is described in the  
specification.

(e). “the service code encodes [[embeds]] in addition to the merchant identification....  
System”

cancelled claim 10 is considerable different than code being embedded and printed  
5 and hence not supported by original disclosure.

page 3, lines 27 to 28 to page 4, line 14,  
page 6, lines 16-22; page 9, lines 10-14  
Page 13, line 23 to 25; Figures 2 and Figure 3

10 These reference to the specification supports this claim language.

(f). “updates payment status data using a plurality of fields from a group of fields...  
status”

15 page 9, lines 22 to 26; Page 12, lines 4 to 10  
page 10, lines 4 to 16 ; page 13, lines 27-29

These references together support this claim language.

### 3. 35 USC § 103 (a) obviousness over Showghi

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Applicant has amended claims 18, 22, 24, 28, 30, 31 and 32 to better define the  
scope of the invention. General and specific distinguishing features of the present  
invention over Showghi that make Showghi not obvious are:

25 The Showghi art is on the convenience of ordering food and paying for such food  
from a seat in a stadium venue from a venue merchant using a wireless communication  
device. Different methods of payment are suggested that include, pre-registering patron  
bankcard data with the venue merchant at the time of entry to the venue, sending  
bankcard data via a customer cell phone device to the venue merchant system, or  
30 alternate forms of payment that include billing the cost of the food items to a telephone bill,

where the telephone company may provide this type of payment service for small dollar amounts to a merchant.

5 Showghi art does not teach privacy and or protection of the customer bankcard data from a restaurant merchant, when paying for a bill in a restaurant. In contrast, the present invention is directed to methods and systems for the protection of the bankcard data during a payment transaction to a restaurant merchant in a restaurant. The claim language including the preamble of independent claims 18, 24 and 30, is highly specific and that is clearly supported by the specification related to the privacy and protection for  
10 the customer bankcard data. Hence these claims and their dependent claims are not obvious over Showghi.

As the Showghi art suggests customer cell may phone may be used and any two-way wireless communication device such as two-way pagers may also be used, see  
15 Showghi figures 3a-d. These devices are customized for ordering food, a precondition before paying for the food; see in Showghi figure 4 menu 34, 36 and 38. For making a payment, the Showghi cell phones or two way communication devices have to provide a bankcard data to the merchant at the time of paying. As Showghi suggests, this may be done either when the merchant owned wireless device is loaned to the customer and  
20 referenced to section/seat number in the venue or when the customer cell phone is used and a reference number is assigned, the customer enters bankcard data in the cell phone or pre-registers his bankcard data with the venue merchant; see Showghi figure 4, item 42.

25 In contrast, in the present invention, the customer does not provide to the merchant for a payment transaction, customer bankcard data. Customer and the merchant both provide the bankcard data and the merchant data respectively, to a third party central system. A third party central system stores both the customer data and the merchant data keeping customer data and merchant data separately and is thus able to process a  
30 payment transaction from customer to merchant,. The claim language including the preamble of 18, 24 and 30, is both highly specific that is clearly supported by the

specification related to the privacy and protection for the customer bankcard data. Hence these claims and their dependent claims are not obvious over Showghi.

Showghi uses an identification code to specify patrons seat location, where such  
5 identification code is printed on the event ticket, as in Showghi Figure 6, ticket 62 and identification code 64. When the patron communicates to the venue merchant, the venue merchant system identifies the patron and or location of the patron in the stadium by this identification code.

10 In contrast, the service code of this invention, as in claim 18, 24 and 30, encodes a merchant number that identifies the restaurant merchant to the third party central system, for retrieving merchant identification data in the third party central system. Hence, the identification code of Showghi is inherently different than the service code of this invention, where the identification code as printed on the event ticket identifies the patron by the seat  
15 number, and in contrast, the service code printed on a restaurant bill in a restaurant encodes a merchant number that identifies the restaurant merchant to the third party central system.

Applicant submits that claims 18 to 32 are not obvious over Showghi under the  
20 Graham v. Deere four-part test for obviousness, which governs the test of obviousness. Showghi does not teach or suggest or makes it obvious independent system claim 18. Claim 18 is distinguishable over Showghi, specifically with, elements (a), (b), and (e) of claim 18 for the following reasons.

25 Showghi teaches a food ordering mechanism from a seat in a sport stadium from a food vendor, using a wireless device that is loaned to the customer for the venue event at the stadium by the food vendor or may be customer device that is customized to display food items. Thus the wireless device of Showghi is customized device for this specific use of food ordering at a sports event venue. In contrast, element (b) teaches a  
30 customer's wireless device, which is different as it is not from the food vendor and is not customized for food ordering from a specific menu from a venue food vendor. Further,

Showghi does not either teach or suggest a bill with a service code, where the code is entered into the wireless device of the customer as in element (a) and (b), because in Showghi there would not be any need for it. Furthermore, Showghi does not teach or suggest element (e), as there is no need for it in Showghi, as claim 18 teaching an  
5 entirely different invention than Showghi. Applicant submits that the nature and scope of the claim 18 is such that it is not obvious under the Graham v. Deere four-part obviousness test of. Dependent claims 19 to 23 likewise are also not anticipated or obvious over Showghi.

10 Applicant submits that similarly Showghi does not anticipate and teach or suggest or makes it obvious independent method claim 24, specifically, steps (a), (b), and (e) of claim 24 for the following reasons.

Showghi teaches a food ordering mechanism from a seat in a sport stadium from  
15 a food vendor, using a wireless device that is loaned to the customer for the venue event at the stadium by the food vendor or may be customer device that is customized to display food items. Thus the wireless device of Showghi is customized device for this specific use of food ordering at a sports event venue. In contrast, step (b) teaches a customer's wireless device, which is different as it is not from the food vendor and is not  
20 customized for food ordering from a specific menu from a venue food vendor. Further, Showghi does not either teach or suggest a bill with a service code, where the code is entered into the wireless device of the customer as in steps (a) and (b), because in Showghi there would not be any need for it. Furthermore, Showghi does not teach or suggest step (e), as there is no need for it in Showghi, as claim 24 teaching an entirely  
25 different invention than Showghi. Applicant submits that the nature and scope of the claim 24 is such that it is not obvious under the Graham v. Deere four-part obviousness test of. Dependent claims 25 to 29, likewise are also not anticipated or obvious over Showghi.



Applicant submits that Showghi does not teach or suggest or makes it obvious independent system claim 30, specifically, element (a) and (b) of claim 30 for the following reasons.

5           Showghi does not teach or suggest element (a) as the customer wireless device communicates to a third party central system, whereas in Showghi the wireless device being loaned to the customer by the food vendor or customer wireless device customized with food menu items, communicates to the food vendor computer system. Showghi does not teach or suggest element (b) as there is no need for it in Showghi,  
10       claim 30 teaching an entirely different invention than Showghi. Applicant submits that the nature and scope of the claim 30 is such that it is not obvious under the Graham v. Deere four-part obviousness test of. Dependent claims 31 to 32, likewise are also not anticipated or obvious over Showghi

15           For the reasons stated above, the nature and scope of the claims 18 to 32, are such that they are not obvious over Showghi under Graham v. Deere test of obviousness.

### CONCLUSION

Applicant respectfully asserts that claims 18 to 32 are patentable for the reasons  
5 set forth above. The application is now in a condition for allowance. Accordingly, an early  
notice of allowance is respectfully requested. The Examiner is requested to call the  
undersigned at 310-540-4095 for any reason that would advance the instant application to  
issue.

10 Dated this the 22nd day of April, 2008

Respectfully submitted,



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20 Response To Final Office Action 1-22-2008



Replacement page

payment of the restaurant bill. The employee turnover in this industry is very high. The waiter employee of the restaurant may be a dishonest person that misuses the customer personal information. In addition, a waiter makes four trips, as described above, to process a payment, making processing a payment a labor-intensive activity.

~~Figure 2 shows a~~<sup>A</sup> news item from Daily Breeze, Jan 20, 2002; page A5 ~~that~~ shows that a credit card fraud ring uses restaurant workers.

10 In light of the above, it is an objective of the present invention to provide an apparatus and method that facilitates payment for a meal in a restaurant without providing sensitive information from the bankcards to employee-waiter.

Another objective is to make more efficient processing of bankcard payments from a customer to the restaurant merchant.

**SUMMARY**

The present invention is directed to an efficient payment system for restaurant industry that facilitates (i) payment by a customer using bankcard for a meal in a restaurant and (ii) payment without the customer providing personal sensitive data from bankcards to employees/waiters of the restaurant.

The payment system includes a central system and a portable wireless device, a card processor, and a merchant payment terminal system. The following steps may be used to effect an efficient and secure payment to the restaurant.

The bill being presented by a waiter carries a service code, identifying a merchant number, a table number and a server number. On receiving the bill, the customer using the wireless device connects to a secure web connection with

## Replacement page

### BRIEF DESCRIPTION OF THE DRAWINGS

The novel features of this invention, as well as the invention itself, both as  
5 to its structure and its operation, will be best understood from the accompanying  
drawings, taken in conjunction with the accompanying description, in which  
similar reference characters refer to similar parts, and in which:

Figure 1 is a block diagram that illustrates a prior art restaurant payment  
10 system;

~~Figure 2 is a news item that illustrates security risks in prior art payment  
system;~~

Figure ~~2~~<sup>2</sup> is a block diagram that illustrates features of the present  
invention payment system between a dining customer and a restaurant owner;

15 Figure ~~4~~<sup>3</sup> is a block diagram that illustrates a central system having  
features of the present invention; and

Figures ~~5~~<sup>4</sup> is illustration of a flow diagram of a payment system having  
features of the present invention.

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# Replacement page

## DESCRIPTION

### Introduction

5        The present invention is directed to a payment system for restaurant industry that facilitates efficient payment using a bankcard for a meal in a restaurant and also without providing personal sensitive data from bankcards to employees/waiters of the restaurant.

10        With initial reference to Figure ~~1~~<sup>2</sup>, the payment system 02 includes a central system 10 and a portable wireless device 12 and a card processor 36. A partition 20 may divide the dining tables with a customer 06 from the merchant computer system 08 with a payment terminal 04. A waiter 22 makes a trip to bring a bill 26 to the customer 06.

15        The bill 26, in addition to the normal items, as illustrated in Figure ~~1~~<sup>2</sup>, carries a service code 336. The service code 336 may be made up of three parts, the merchant number 442, the table number 352 and the server number 354.

20        The central system 10 stores and/or can readily access merchant data including merchant ID and personal data of a customer including information regarding one or more bank accounts of the customer.

25        On receiving the bill 26, the customer 06 using device 12 connects to a secure web connection with the system 10 and is presented a data card 14. The customer enters the data as identified and as described later. The central system 10 with the pre-stored data of the merchant and customer and using the card processor 36 process the payment. After the approval of the payment transaction is received from the card processor 36, the central system 10 presents to the  
30        customer, on the wireless device 12, a data card 16, showing that the payment has been processed. The central system 10 concurrently sends to the merchant

## Replacement Page

system 08 a data record 24 showing the payment has been processed successfully. Optionally, the merchant system 08 is attached to a display terminal 23 that displays the table number, server number, amount and the status of the payment by a color coded display icon 18, where the waiter 22 may  
5 verify the payment has been made.

These and other aspects of the invention are described herein, where the headings are provided for the convenience of the reader.

### 10 **Wireless Device 12**

The portable wireless device 12 may be a cellular telephone with a screen and a keypad. Alternatively, it may be personal digital assistant (PDA) with a wireless modem, which also has a display screen and a soft keypad.

### 15 **Central System 10**

Referring to Figure ~~4~~<sup>3</sup>, the central system 10 includes (i) a system storage device 426, (ii) a system operating system 402 stored in the system storage device 426, (iii) a system program 404 stored in the system storage device 426, (iv) and a system processor 430 connected to the system storage device 426.

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The system processor 430 can include one or more conventional CPU's. The system processor 430 can be capable of high volume processing and database searches.

25 The system storage device 426 can, for example, include one or more magnetic disk drives, magnetic tape drives, optical storage units, CD-ROM drives and/or flash memory. The system storage device 426 also contains a plurality of databases used in the processing of transactions pursuant to the present invention. For example, as illustrated in Figure ~~4~~<sup>3</sup>, the system storage device 426  
30 can include a merchant database 440, a customer database 438 and a transaction database 442.

## Replacement Page

The system 10 includes a system network interface (not shown) that allows the system 10 to communicate with the customer 06 and the merchant 08 and the card processor 36. Conventional internal or external modems may serve  
5 as the system network interface. In one embodiment, the system network interface is connected to the customer, merchant and the card processor on a global network.

A merchant network interface (not shown) allows the merchant 08 to  
10 communicate with the system 10. Conventional internal or external modems may serve as the merchant network interface. In one embodiment, the merchant network interface is connected to the system 10 on the global network.

A customer network interface (not shown) allows the customer to  
15 communicate with the system 10. Conventional internal or external modems may serve as the customer network interface. In one embodiment, the customer network interface is connected to the system 10 on the global network.

The system 10 interfaces with a card processor 36 representing a  
20 bankcard authorization network. The bankcard authorization network is a computer system that process payments from bankcards using an automated clearing house to process payments between banks.

The system processor 430 is operative with the system program 404 to  
25 perform the Security Function 406, Payment Processing Function 408, Customer Interface function 410, Merchant Interface function 412, and Interface function 414.

### **Customer database 438**

With reference to Figure ~~4~~<sup>3</sup>, the customer database 438 within the central  
30 system 10 contains private data specifically related to the customer 06 that is transferred to the system 10 from the customer.

## Replacement Page

This database contains the customer identifier 450, CPIN 456, Bank account data 458 and e-mail address 460. The telephone number of the wireless device may serve as the customer identifier. Multiple CPIN and bank account data for each customer may be maintained allowing a customer to use any one of his/her accounts whether they are checking accounts, debit card accounts or credit card accounts. Card personal identification number (CPIN) may be used to identify one of many cards that the customer wishes to use for a payment.

### **Merchant database 440**

This database maintains data on the merchants who use the payment system 02. The database 440 maintains data on each of the merchant as merchant number 442, merchant name 444, a URL 446, a merchant identification 448, and e-mail address 450.

Merchant ID 448 is an existing ID of the merchant that is used to process his existing card transactions. URL 446 is the uniform resource locator on the global network of his computer system 08, where he can receive the payment record 24 from the central system 10. Alternatively, E-mail 450 is where he can receive record 24 from the central system 10 of payment transactions.

### **Transaction database 442**

This database logs all payment transactions by a transaction reference 340, date/time of transaction 342, merchant number 442, amount 332, authorization code 334 received from the card processor 36, tip amount 330, table number 352, server number 354, and customer identification 450

### **Merchant System 08**

With reference to Figures ~~2~~<sup>2</sup>, the merchant system 08 is a prior art computer system. It may be used by the merchant in conjunction with a card



## Replacement Page

processing terminal 04 that is connected to the card processor 36 to process card payments.

According to the present invention, the merchant system 08 may optionally be connected to a display terminal 23 that displays the status of payment transactions. The status of the payments may be displayed by the table number, the server number, the amount to be paid or paid and the status of the payment in a color-coded format 18. This enables the waiter 22 to readily determine that the payment has been successfully processed.

Optionally, the waiter 22 on preparing the bill 26 may use the computer system 08. When the bill 26 is prepared, the display terminal 23 may show the table number, server number, amount and status as payment in process. When the record 24 is received by the merchant system 08 from the central system 10, the status may be updated as Paid and the amount may be updated to what was paid including the tip amount.

### Central System Program 404

With reference to Figures ~~3~~<sup>2</sup> and ~~4~~<sup>3</sup>, the central system program 404 is operative with the central system processor 430 to provide the functions of (i) Security Function 406, (ii) Payment Processing Function 408, (iii) Customer Interface Function 410, (iv) Merchant Interface Function 412, (v) and an Interface function 414. Further, the system program 404 is operated with the payment system processor 430 to perform the tasks of the central system 10 provided herein.

The Security Function 406 performs the tasks of determining and verifying from the customer telephone number 450 and CPIN 456 the customer 06 and the specific bank account 458 when the customer initiates a payment transaction using the wireless device 12. The system 10 is a secure server and uses encryption when communicating with the device 12 and the card processor 36.